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10/511,787	10/15/2004	Steven Scott Crump	S697.12-0063	4806

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KINNEY & LANGE, P.A.
THE KINNEY & LANGE BUILDING
312 SOUTH THIRD STREET
MINNEAPOLIS, MN 55415-1002

EXAMINER	
HUSON, MONICA ANNE	
ART UNIT	**PAPER NUMBER**
1732	

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/511,787	CRUMP ET AL.	
	Examiner	Art Unit	
	Monica A. Huson	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-17,19-23,25-30,33-38,40-42 and 44* is/are rejected.

7)☒ Claim(s) *6,18,24,31,32,39 and 43* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the Amendment filed 6 January 2006.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-4, 9-17, 19-22, 26-29, 33 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kotnis et al. (U.S. Patent 6,355,196), in view of Rosato's Injection Molding Handbook (3rd ed.). Regarding Claim 1, Kotnis et al., hereafter "Kotnis," show that it is known to carry out a method for making a prototype plastic injection molded part (Abstract), comprising the steps of providing a plastic mold tool defining a mold cavity (Column 4, lines 1-3); injecting a liquefied ribbon of plastic material into the mold cavity at a pressure of less than 5000 psi, until the material fills the cavity (Column 4, lines 5-7; Column 5, lines 20-22); curing the plastic material in the mold cavity to form the prototype part (Column 4, lines 8-10). Kotnis does not specifically show injecting the liquefied ribbon of plastic material using an extrusion head. Rosato shows that it is known to carry out a method including injecting the liquefied ribbon of plastic material into the mold caivty using an extrusion head (Page 29, Figure 2-2). Rosato and Kotnis are combinable because they are concerned with a similar technical field, namely, methods of injection molding. It would have been prima facie obvious to one of ordinary skill in

the art at the time the invention was made to use Rosato's extrusion head to inject Kotnis' liquefied ribbon of plastic material in order to ensure proper melt composition and form of the injected material.

Regarding Claim 3, Kotnis shows the process as claimed as discussed above in the rejection of claim 1 above, including a method comprising heating the mold tool to approximately the extrusion temperature, prior to the injection step (Column 9, lines 29-40), meeting applicant's claim.

Regarding Claim 4, Kotnis shows the process as claimed as discussed above in the rejection of claim 1 above, including a method wherein the injection pressure is less than 2000 psi (Column 5, lines 20-22), meeting applicant's claim.

Regarding Claim 9, Kotnis shows that it is known to carry out a method for making a prototype plastic injection molded part (Abstract) comprising the steps of providing a plastic mold tool defining a mold cavity (Column 5, lines 49-52); injecting a thermoplastic material into the mold cavity as a liquefied ribbon of material, at a pressure of less than 5000 psi, so that the thermoplastic material fills the mold cavity (Column 5, lines 1-2, 20-22); cooling the thermoplastic material in the mold cavity to form the prototype part (Column 5, lines 3-4). Kotnis does not specifically show injecting the liquefied ribbon of plastic material using an extrusion head. Rosato shows that it is known to carry out a method including injecting the liquefied ribbon of plastic material into the mold caivty using an extrusion head (Page 29, Figure 2-2). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Rosato's extrusion head to inject Kotnis' liquefied ribbon of plastic material in order to ensure proper melt composition and form of the injected material.

Regarding Claim 10, Kotnis shows the process as claimed as discussed above in the rejection of claim 9 above, including a method comprising the step of building the mold tool using a rapid prototype technique, based on computer file data representing a desired prototype part (Column 1, lines 6-9), meeting applicant's claim.

Regarding Claim 11, Kotnis shows the process as claimed as discussed above in the rejection of claim 10 above, including a method wherein the mold tool is built in a fused deposition modeling machine (Column 1, lines 59-65), meeting applicant's claim.

Regarding Claim 12, Kotnis shows the process as claimed as discussed above in the rejection of claim 11 above, including a method wherein the building step and the injection step are performed in the same fused deposition modeling machine (Column 1, lines 59-65), meeting applicant's claim.

Regarding Claim 13, Kotnis shows the process as claimed as discussed above in the rejection of claim 9 above, including a method wherein the injecting step is done in a fused deposition modeling machine (Column 1, lines 59-65), meeting applicant's claim.

Regarding Claim 14, Kotnis shows the process as claimed as discussed above in the rejection of claim 9 above, including a method wherein the mold material is injected into the mold cavity using a melt extruder (Column 1, lines 60-61), meeting applicant's claim.

Regarding Claim 15, Kotnis shows the process as claimed as discussed above in the rejection of claim 14 above, including a method wherein the melt extruder comprises a filament pump (Column 1, lines 59-65), meeting applicant's claim.

Regarding Claim 16, Kotnis shows the process as claimed as discussed above in the rejection of claim 14 above, but he does not show using a piston pump. Rosato shows that it is

known to carry out a method wherein the melt extruder comprises a piston pump (Page 147). Rosato and Kotnis are combinable because they are concerned with a similar technical field, namely that of methods of injection molding. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Rosato's piston pump in Kotnis' molding process in order to take advantage of applicable piston pump technologies.

Regarding Claim 17, Kotnis shows the process as claimed as discussed above in the rejection of claim 14 above, but he does not show sprue details. Rosato shows that it is known to carry out a method comprising positioning a sprue in the mold tool such that a dispensing end of the sprue is directed into the mold cavity; attaching an inlet end of the sprue to a dispensing tip of the melt extruder, wherein the thermoplastic material is injected from the melt extruder into the mold cavity via the sprue (Page 263). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Rosato's sprue teachings in Kotnis' molding method in order to most efficiently form the molded article.

Regarding Claim 19, Kotnis shows the process as claimed as discussed above in the rejection of claim 9 above, including a method further comprising heating the mold tool to approximately the extrusion temperature, prior to the injection step (Column 9, lines 29-40), meeting applicant's claim.

Regarding Claim 20, Kotnis shows the process as claimed as discussed above in the rejection of claim 9 above, but he does not show using a release agent. Rosato shows that it is known to carry out a method comprising coating surfaces of the mold cavity with a release agent, prior to the injecting step (Pages 334, 354). It would have been prima facie obvious to one of

ordinary skill in the art at the time the invention was made to use Rosato's release agent during Kotnis' molding method in order to insure proper release of the molded articles.

Regarding Claim 21, Kotnis shows the process as claimed as discussed above in the rejection of claim 9 above, but he does not show monitoring steps. Rosato shows that it is known to carry out a method comprising monitoring the pressure in the cavity during the injecting step and responsively adjusting the injection pressure (Pages 692-693). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Rosato's monitoring step during Kotnis' molding method in order to avoid applying too much pressure to the mold or to the molded article and causing any kind of failure.

Regarding Claim 22, Kotnis shows the process as claimed as discussed above in the rejection of claim 9 above, including a method wherein the injection pressure is less than 2000 psi (Column 5, lines 20-22), meeting applicant's claim.

Regarding Claim 26, Kotnis shows the process as claimed as discussed above in the rejection of claim 9 above, but he does not show compensating for part shrinkage. Rosato shows that it is known to carry out a method comprising maintaining constant pressure on the mold tool during the cooling step to compensate for shrinkage of the prototype part and the mold tool (Page 445). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to follow Rosato's compensation steps during Kotnis' molding method in order to most accurately form the molded article.

Regarding Claim 27, Kotnis shows the process as claimed as discussed above in the rejection of claim 9 above, including a method wherein the prototype part is cooled in the mold

cavity to a temperature approximating room temperature (Column 9, lines 41-45), meeting applicant's claim.

Regarding Claim 28, Kotnis shows the process as claimed as discussed above in the rejection of claim 9 above, including a method further comprising the step of vapor smoothing surfaces of the mold tool prior to the injecting step (Column 9, liens 26-28), meeting applicant's claim.

Regarding Claim 29, Kotnis shows the process as claimed as discussed above in the rejection of claim 9, including a method wherein the thermoplastic material is ABS (Column 5, lines 44-48), meeting applicant's claim.

Regarding Claim 33, Kotnis shows the process as claimed as discussed above in the rejection of claim 9 above, but he does not show using vacuum assist. Rosato shows that it is known to carry out a method wherein the injecting step is performed using a vacuum assist (Page 150). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Rosato's vacuum assist during Kotnis' molding method in order to most accurately and efficiently form the final article.

Regarding Claim 41, Kotnis shows that it is known to carry out a method for making a prototype plastic injection molded part (Abstract), comprising the steps of providing a plastic mold tool defining a mold cavity (Column 4, lines 1-3); providing a supply of two or more reactant materials which form a thermoset resin when reacted together, mixing the reactant materials together (Column 10, lines 42-44); injecting the reactant materials from an extruder into the mold cavity as a liquefied ribbon of material, at a controlled pressure of less than 5000 psi, so that the reactant materials fill the cavity (Column 4, lines 5-7; Column 5, lines 20-22; It is

noted that an extruder is a known method of introducing materials to an injection molding machine.); heating the reactant materials in the mold cavity to form the molded prototype part (Column 10, lines 63-65); cooling the molded prototype part in the mold cavity (Column 10, lines 65-66).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kotnis and Rosato, further in view of Priederman et al. (U.S. Patent 6,790,403). Kotnis shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show using an alkali-soluble modeling material. Priederman et al., hereafter "Priederman," show that it is known to carry out a method wherein the plastic mold tool is formed from an alkali-soluble modeling material (Abstract). Kotnis and Priederman are combinable because they are concerned with a similar technical field, namely, methods of injection molding prototyping materials. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Priederman's specific mold material for Kotnis' molding method in order for the mold to withstand desired temperatures, pressures, or chemical environments.

With regard to Claim 2, the applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective

U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Claims 5, 7, 8, 23, 25, 34, 42, and 44 are rejected under 35 USC 103(a) as being unpatentable over Kotnis.

Regarding Claim 5, Kotnis shows the process as claimed as discussed above in the rejection of claim 1 above, including showing an injection pressure of about 1200 psi (Column 5, lines 20-22). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use an injection pressure of less than 500 psi in order to lower the pressure without removing the utility or applicability of the injection process towards a certain end-use product.

Regarding Claim 7, Kotnis shows the process as claimed as discussed above in the rejection of claim 1 above, including a method including clamping the mold tool to a fixture prior to the injecting step (Column 9, lines 29-40). Although he does not give a specific clamping pressure, It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use a clamping pressure of less than or equal to 10 tons in order to appropriately clamp the molding machine without causing damage to the machine, the molding material, or the final product.

Regarding Claims 8 and 34, Kotnis shows the process as claimed as discussed above in the rejection of claim 1 above, including a method which carefully monitors the heating and cooling of the mold relative to the molding materials and general process (Column 9, lines 29-40). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to design Kotnis' process as an adiabatic one because in a molding operation, a net loss or gain of heat/energy is not desired and may result in damage to the final molded article.

Regarding Claim 23, Kotnis shows the process as claimed as discussed above in the rejection of claim 9 above, including showing an injection pressure of about 1200 psi (Column 5, lines 20-22). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use an injection pressure of less than 500 psi in order to lower the pressure without removing the utility or applicability of the injection process towards a certain end-use product.

Regarding Claim 25, Kotnis shows the process as claimed as discussed above in the rejection of claim 9 above, including a method including clamping the mold tool to a fixture prior to the injecting step (Column 9, lines 29-40). Although he does not give a specific clamping pressure, It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use a clamping pressure of less than or equal to 10 tons in order to appropriately clamp the molding machine without causing damage to the machine, the molding material, or the final product.

Regarding Claim 42, Kotnis shows the process as claimed as discussed above in the rejection of claim 41 above, including showing an injection pressure of about 1200 psi (Column

5, lines 20-22). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use an injection pressure of less than 500 psi in order to lower the pressure without removing the utility or applicability of the injection process towards a certain end-use product.

Regarding Claim 44, Kotnis shows the process as claimed as discussed above in the rejection of claim 41 above, including a method which carefully monitors the heating and cooling of the mold relative to the molding materials and general process (Column 9, lines 29-40). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to design Kotnis' process as an adiabatic one because in a molding operation, a net loss or gain of heat/energy is not desired and may result in damage to the final molded article.

Claim 30 is rejected under 35 USC 103(a) as being unpatentable over Kotnis, in view of Gale et al. (U.S. Patent 6,287,428). Kotnis shows the process as claimed as discussed above in the rejection of claim 9 above, but he does not show specific compositions. Gale et al., hereafter "Gale," show that it is known to carry out a method wherein the plastic mold tool is formed from a thermoplastic material comprising at least 50 weight percent of nylon (Column 4, lines 52-54). Gale and Kotnis are combinable because they are concerned with a similar technical field, namely that of methods of forming plastic articles. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Gale's composition during Kotnis' molding method in order to form an article possessing the desired physical and/or chemical properties of the specific composition.

Claims 35, 37, 38, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kotnis, in view of Beldue et al. (U.S. Patent 5,952,018).

Regarding Claim 35, Kotnis shows that it is known to carry out a method for making a prototype plastic injection molded part (Abstract) comprising the steps of providing a plastic mold tool defining a mold cavity (Column 5, lines 49-52); injecting a polymer into the mold cavity at a pressure of less than 5000 psi, until the material fills the cavity (Column 5, lines 1-2, 20-22); and solidifying the polymer in the mold cavity thereby forming the molded prototype part (Column 5, lines 3-4). Kotnis does not show building a mold with an additive process rapid prototyping machine. Beldue shows that it is known to carry out a method wherein the plastic mold is built with an additive process rapid prototyping machine, and the polymer is injected into the mold cavity using the additive process rapid prototyping machine (Column 1, lines 27-33, 57-62; Column 2, lines 9-11; It is noted that since the process of injecting the material into the mold uses the mold cavity which was built with an additive process rapid prototyping machine, the additive process rapid prototyping machine is "used" by way of the mold cavity.). Beldue and Kotnis are combinable because they are concerned with a similar technical field, namely, methods of prototyping articles. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Beldue's fused deposition modeling to make the mold for Kotnis' molding process in order to take advantage of specific fused deposition modeling technology features.

Regarding Claim 37, Kotnis shows the process as claimed as discussed above in the rejection of claim 35 above, but he does not show making a mold with fused deposition

modeling. Beldue shows that it is known to carry out a method wherein the rapid prototyping machine comprises a fused deposition modeling machine (Column 1, lines 27-33, 57-62; Column 2, lines 9-11). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Beldue's fused deposition modeling to make the mold for Kotnis' molding process in order to take advantage of specific fused deposition modeling technology features.

Regarding Claim 38, Kotnis shows the process as claimed as discussed above in the rejection of claim 35 above, including showing an injection pressure of about 1200 psi (Column 5, lines 20-22). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use an injection pressure of less than 500 psi in order to lower the pressure without removing the utility or applicability of the injection process towards a certain end-use product.

Regarding Claim 40, Kotnis shows the process as claimed as discussed above in the rejection of claim 35 above, including a method which carefully monitors the heating and cooling of the mold relative to the molding materials and general process (Column 9, lines 29-40). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to design Kotnis' process as an adiabatic one because in a molding operation, a net loss or gain of heat/energy is not desired and may result in damage to the final molded article.

Claim 36 is rejected under 35 USC 103(a) as being unpatentable over Kotnis and Beldue, in view of Edwards et al. (U.S. Patent 5,938,876). Kotnis shows the process as claimed as

discussed in the rejection of Claim 35 above, but he does not show using a photopolymer. Edwards et al., hereafter "Edwards," show that it is known to carry out a method wherein the polymer comprises a photopolymer, and wherein solidifying the polymer comprises exposing the polymer to light (Column 2, lines 30-33, 52-56). Edwards and Kotnis are combinable because they are concerned with a similar technical field, namely that of methods of making plastic articles. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Edwards' photopolymer in Kotnis' molding method in order to form an article possessing the desired physical and/or chemical properties of the specific polymer.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 2 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,790,403. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claim 2 is merely a broader version of the patented claim. Therefore the instant claim 2 is not patentably distinct from the '403's claim 1, as it is effectively anticipated by the patented claim. It is noted that the standard is "not patentably distinct" which includes both obviousness and anticipation.

Claim 10 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/511783. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claim 2 is merely a broader version of the patented claim. Therefore the instant claim 10 is not patentably distinct from the '783's claim 1, as it is effectively anticipated by the copending claim. It is noted that the standard is "not patentably distinct" which includes both obviousness and anticipation.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

Claims 6, 18, 24, 31, 32, 39, and 43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-5, 7-17, 19-23, 25-30, 33-38, 40-42, and 44 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monica A Huson
March 9, 2006

MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER